

2SD1819G

Silicon NPN epitaxial planar type

For general amplification

Complementary to 2SB1218G

■ Features

- High forward current transfer ratio h_{FE}
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape pacing and the magazine pacing.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | V_{CBO} | 60 | V |
| Collector-emitter voltage (Base open) | V_{CEO} | 50 | V |
| Emitter-base voltage (Collector open) | V_{EBO} | 7 | V |
| Collector current | I_C | 100 | mA |
| Peak collector current | I_{CP} | 200 | mA |
| Collector power dissipation | P_C | 150 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

■ Package

- Code
SMini3-F2
- Marking Symbol: Z
- Pin Name
1: Base
2: Emitter
3: Collector

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

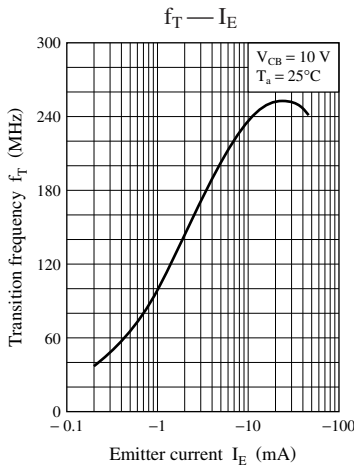
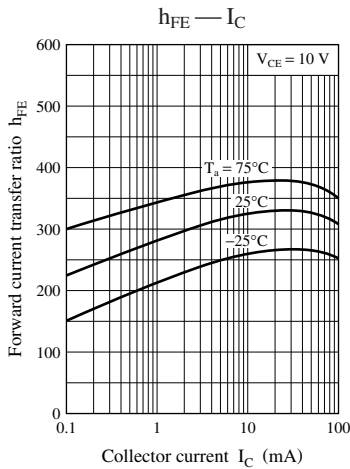
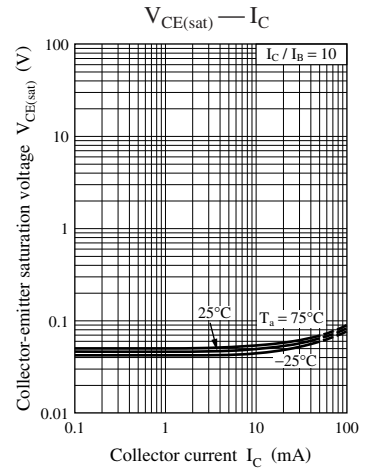
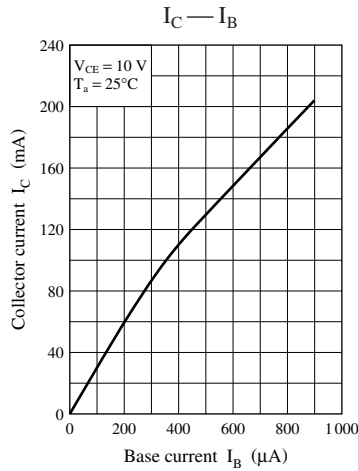
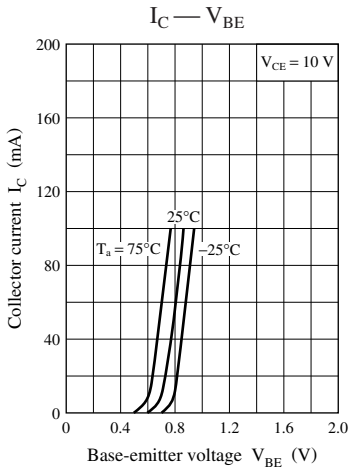
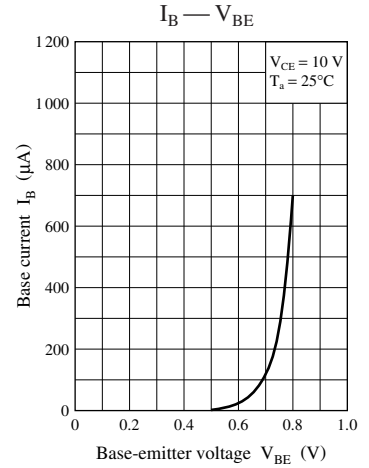
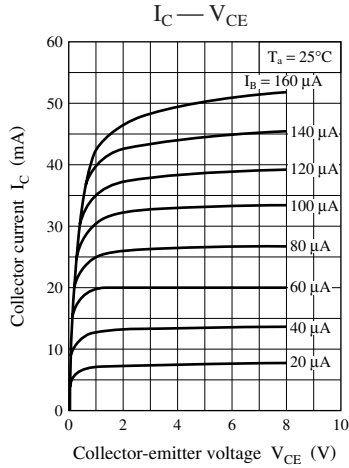
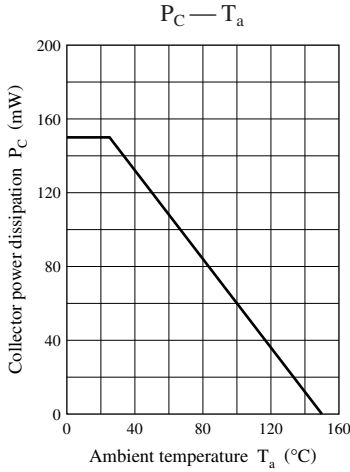
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|---|-----|-----|-----|---------------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = 10 \mu\text{A}, I_E = 0$ | 60 | | | V |
| Collector-emitter voltage (Base open) | V_{CEO} | $I_C = 2 \text{ mA}, I_B = 0$ | 50 | | | V |
| Emitter-base voltage (Collector open) | V_{EBO} | $I_E = 10 \mu\text{A}, I_C = 0$ | 7 | | | V |
| Collector-base cutoff current (Emitter open) | I_{CBO} | $V_{CB} = 20 \text{ V}, I_E = 0$ | | | 0.1 | μA |
| Collector-emitter cutoff current (Base open) | I_{CEO} | $V_{CE} = 10 \text{ V}, I_B = 0$ | | | 100 | μA |
| Forward current transfer ratio | h_{FE1}^* | $V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$ | 160 | | 460 | — |
| | h_{FE2} | $V_{CE} = 2 \text{ V}, I_C = 100 \text{ mA}$ | 90 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$ | | 0.1 | 0.3 | V |
| Transition frequency | f_T | $V_{CB} = 10 \text{ V}, I_E = -2 \text{ mA}, f = 200 \text{ MHz}$ | | 150 | | MHz |
| Collector output capacitance (Common base, input open circuited) | C_{ob} | $V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ | | 3.5 | | pF |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

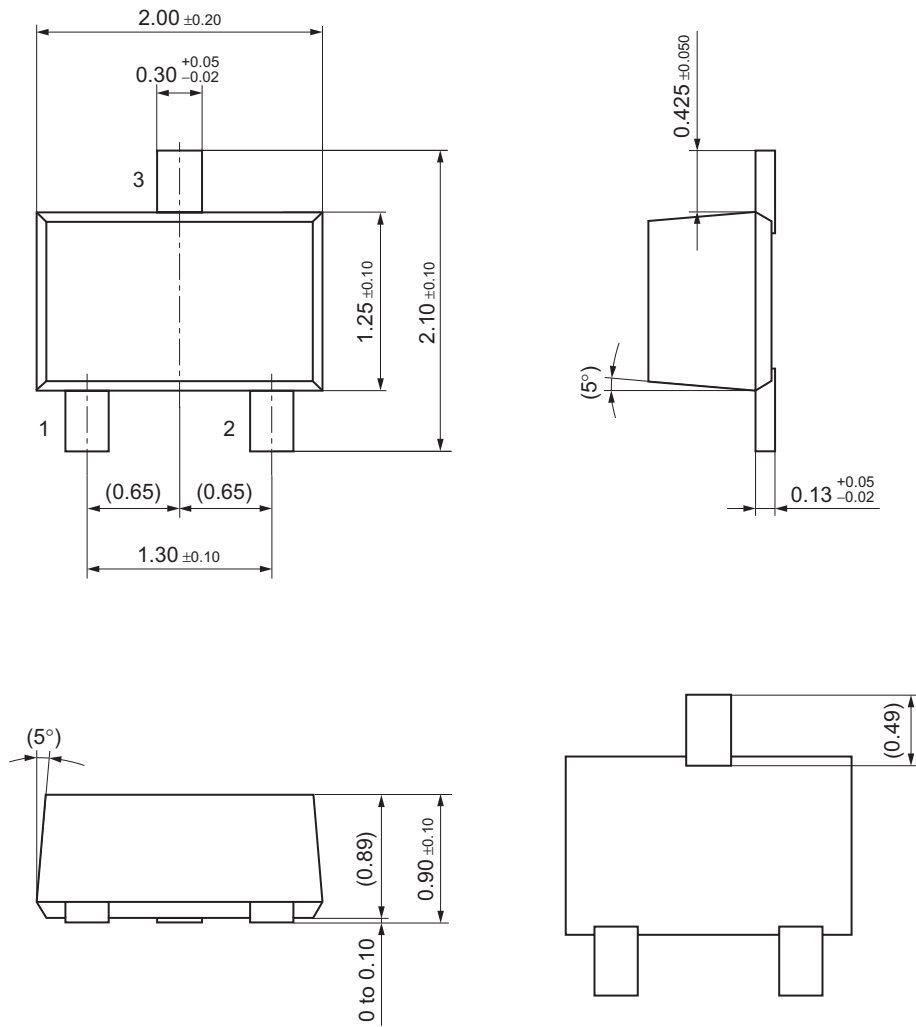
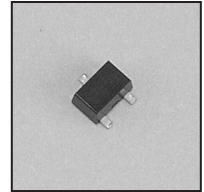
| Rank | Q | R | S | No rank |
|----------------|------------|------------|------------|------------|
| h_{FE1} | 160 to 260 | 210 to 340 | 290 to 460 | 160 to 460 |
| Marking symbol | ZQ | ZR | ZS | Z |

Product of no-rank is not classified and have no marking symbol for rank.



SMini3-F2

Unit: mm



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